Falls, Plate XVI, fig. 2, the calcareous deposits are 60 feet thick immediately above the natural fall, but as they extend upstream for a distance of 150 yards, they gradually diminish to only a few feet in thickness. At one time travertine covered completely the present Turner Falls, which are about one-eighth their former size. During the last extensive erosion cycle, the unwashed formation on either side of the main channel was unaltered, but as the soft portions of the rocks crumbled away, the channel became deeper, the fissures in the travertine opened and were extended into a deep gorge. In spite of successive erosions, the travertine continues to grow by the aid of algae and mosses. The mosses act only indirectly in the precipitation of calcium carbonate, principally by supplying a larger absorptive and adsorptive surface for the evaporation of the calcareous water.

EXPLANATION OF PLATE XV

Didymodon tophaceus (Brid.) Jur. × ½

1. Recent travertine showing the mode of travertine formation about moss plants that grow in erect tufts.
2. Longitudinal section of hardened travertine showing the petrified moss plants.
3. Cross-section of hardened travertine showing the minute canals left by the decay of the moss stems.
4. Recent travertine showing the mode of travertine formation on pendent moss plants.
5. Recent travertine formed by mosses and unicellular algae.
6. The type of travertine that develops on pendent plants of *Didymodon*.

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MOSSES FROM FLORIDA COLLECTED BY SEVERIN RAPP

ELIZABETH G. BRITTON

The last collection sent to us by Mr. Severin Rapp from the vicinity of Sanford, Florida, contains some very interesting species, including one tropical genus, new to the United States, *Jagerinopsis* Broth., and the extension northward of one tropical *Dicranella* determined by Mr. Williams as *D. subinclinata* Lorentz, heretofore known only from Cuba, Mexico and Panama to South America. This station in Florida and one of our own collections from the Isle of Pines, Cuba, are additions to its range as given in N. A. Flora. It grows "on clay banks along creeks" and may be looked for in the same habitats as its more common relative, *D. L'Herminieri* (*D. leptotrichoides R. & C.*). *D. heteromalla orthocarpa* also has been found, but is rare in *Florida*, and *Mnium cuspidatum* seems to reach its southern range in this state. Excellent specimens of such common species as the following were also collected: *Bruchia Donellii* and *B. Ravenellii*, *Trematodon longicollis*, *Leucobryum albidum* (Brid.) Lindb. (*L. sediforme*), *Syrrhopodon floridanus*, *Weisia longiseta*, *Funaria flavicans*, three Southern varieties of *Physcomitrium turbinatum*, two Ephemerums, and *Brachymenium Wrightii* (Sull.) Broth., all in excellent fruit. Several Archidiums—*A. alternifolium*, (sent as *A. Ravenellii* and *A. tenerrimum*) and *A. Donellii*—show that this genus varies in Florida as much as other northern species do in that moist warm climate.

The following pleurocarpous species were received: ***Amblystegium floridanum*** and ***irriguum***, ***Entodon Drummondii***, ***Campylium chrysophyllum*** mixed with ***Haplocladium microphyllum***, ***Neckera Jamaicensis*** (Gmel.) E. G. B. (*N. undulata Hedw.*), ***Rhizogonium spiniforme***, ***Rhynchostegium serrulatum*** and ***Clasmatodon parvulus***. The rarer species are ***Cyclodictyon varians*** (Sull.) Broth., from "muddy places in Hammock"; ***Callicostella scabrida*** (Hook.) Jaeger. (*Hookeria Cruceana* Duby.); ***Ectropothecium caloosiense*** (Aust.) Britt., and **Sematophyllum subpinnatum** (Brid.) E. G. B. or **Raphidostegium subpinnatum** (*R. Kegelianum*). This species is common in the West Indies, reaching its northern range in Florida.

An undescribed species of ***Jagerinopsis*** also occurs in Cuba, but so far has only been found sterile; I have called it *J. squarrosa* in reference to its spreading leaves, a character which it shares with other species of the genus.

ADDITIONS TO THE LIST OF BRYOPHYTES FROM CAPE BRETON[1]

GEORGE E. NICHOLS

Two years ago the writer published an account of the bryophytes of Nova Scotia, with special reference to Cape Breton Island.[2] Since then, two more summers have been occupied in the botanical exploration of northern Cape Breton, and in this connection thirteen bryophytes heretofore unrecorded from there have been collected.[3] A list of these is given below. Except where otherwise indicated the various species apparently are unknown from the peninsula of Nova Scotia.

1. LOPHOCOLEA MINOR Nees. French River *1834*.

2. SCAPANIA CURTA (Mart.) Dumort. Aspy Bay *2024*.

3. ANTHOCEROS LEVIS L. Middle River *2015*.

4. SPHAGNUM CAPILLACEUM (Weiss) Schrank. Mt. Smoky *1763*. This has also been recently collected near Annapolis, Nova Scotia, by Professor J. B. Porter. The var. *tenellum* (Schimp.) A. L. Andrews was reported in the previous paper.

5. SPHAGNUM DUSENII C. Jens. Ingonish Barrens *2001*.

6. SWARTZIA INCLINATA Ehrh. Aspy Bay *2014*.

7. TORTULA MUCRONIFOLIA Schwaegr. Aspy Bay *2008*. Recorded also from Nova Scotia (Macoun).

8. TORTULA RURALIS (L.) Ehrh. Aspy Bay *1807*.

9. BRYUM FALLAX Milde. Barrasois *1806*.

10. BRYUM INCLINATUM (Sw.) Br & Sch. Aspy Bay *2012;* Cape North *1805*. Recorded also from Nova Scotia (Macoun).

11. CALLIERGON GIGANTEUM Schimp. French River *1815;* Aspy Bay *1837*.

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[1] Contribution from the Osborn Botanical Laboratory.

[2] BRYOLOGIST **19**: 38–47. 1916.

[3] To the species recorded in this paper may be added *Jungermannia lanceolata*, *Ulota phyllantha*, and *Encalypta contorta*, not previously collected by the writer though listed by Macoun.